

January 27, 1999

**Regulatory Analysis of OSHA's  
Safety and Health Program Rule  
(COST METHODOLOGY FLOW CHARTS)**

*Prepared on behalf of*

**U.S. Small Business Administration  
Washington, D.C.**

*by*

**POLICY PLANNING & EVALUATION, INC.**

**800 Third St., Herndon, VA 20170**

**Tel. 703-709-0888; Fax 703-709-7650; email [ppe@pipeline.com](mailto:ppe@pipeline.com)**

## Management Leadership Establish Management Responsibility

Management Hours Spent from 0.5 to 8	X	Management Labor Rate \$23.80	=	Management Cost \$11.90 to \$190.40
				+
Clerical Hours Spent from 0.05 to 0.8	X	Base Labor Rate \$18.50	=	Clerical Cost \$0.92 to \$14.81
				=
				Total Cost \$12.82 to \$205.21

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Total Cost \$12.82 to \$205.21	X	Number of Establishments 4,487,735	$\div$	Annualized 7.24	=	Total Annual Cost \$7,946,514 to \$127,200,276
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## Management Leadership Initial Training of Managers

$$\begin{array}{rclclcl}
 \boxed{\begin{array}{c} \text{Number of} \\ \text{Managers Trained} \\ \text{from 1 to 70} \end{array}} & \times & \boxed{\begin{array}{c} \text{Management Labor Rate} \\ \$23.80 \end{array}} & \times & \boxed{\begin{array}{c} \text{Hours Spent} \\ 2 \end{array}} & = & \boxed{\begin{array}{c} \text{Cost of} \\ \text{Lost Output} \\ \$47.60 \text{ to } \$4,284 \end{array}} \\
 & & & & & & + \\
 & & & & & & \boxed{\begin{array}{c} \text{Cost of Consultant} \\ \text{or College Course} \\ \$300 \text{ to } \$500 \end{array}} \\
 & & & & & & = \\
 & & & & & & \boxed{\begin{array}{c} \text{Total Cost} \\ \$347.60 \text{ to } \$4,784 \end{array}}
 \end{array}$$

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$$\boxed{\begin{array}{c} \text{Total Cost} \\ \$347.60 \text{ to } \$4,784 \end{array}} \times \boxed{\begin{array}{c} \text{Number of} \\ \text{Establishments} \\ 4,487,735 \end{array}} \div \boxed{\begin{array}{c} \text{Annualized} \\ 7.24 \end{array}} = \boxed{\begin{array}{c} \text{Total Annual Cost} \\ \$215,460,873 \text{ to} \\ \$2,965,376,276 \end{array}}$$

### Management Leadership Periodic Training of Managers

$$\begin{array}{|c|} \hline \text{Number of} \\ \text{Managers Trained} \\ \hline \text{from 1 to 70} \\ \hline \end{array} \times \begin{array}{|c|} \hline \text{Management Labor Rate} \\ \hline \$23.80 \\ \hline \end{array} \times \begin{array}{|c|} \hline \text{Hours Spent} \\ \hline 1 \\ \hline \end{array} = \begin{array}{|c|} \hline \text{Cost of} \\ \text{Lost Output} \\ \hline \$23.80 \text{ to } \$2,142 \\ \hline \end{array}$$

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$$\begin{array}{|c|} \hline \text{Cost of} \\ \text{Lost Output} \\ \hline \$23.80 \text{ to } \$2,142 \\ \hline \end{array} \times \begin{array}{|c|} \hline \text{Number of} \\ \text{Establishments} \\ \hline 4,487,735 \\ \hline \end{array} = \begin{array}{|c|} \hline \text{Total Annual Cost} \\ \hline \$106,808,093 \text{ to} \\ \$9,612,728,370 \\ \hline \end{array}$$



## Employee Participation Investigations

Number of Injuries/ Illnesses 3,250,000	X	Management Labor Rate \$23.80	X	Hours Spent 1.5	=	Subtotal \$116,025,000
					+	
	X	Base Labor Rate \$18.50	X	Hours Spent 0.45	=	Subtotal \$27,056,250
					+	
Number of Near Misses 32,500,000	X	Management Labor Rate \$23.80	X	Hours Spent 0.5	=	Subtotal \$386,750,000
					+	
	X	Base Labor Rate \$18.50	X	Hours Spent 0.15	=	Subtotal \$90,187,500
					+	
Number of Fatalities 1,878	X	Management Labor Rate \$23.80	X	Hours Spent 80	=	Subtotal \$3,575,712
					+	
	X	Base Labor Rate \$18.50	X	Hours Spent 24	=	Subtotal \$833,832
					=	
						Total = \$624,428,294

Number of Injuries/ Illnesses 3,250,000	X	Management Labor Rate \$23.80	X	Hours Spent 1.5	=	Subtotal \$116,025,000
						+
	X	Base Labor Rate \$18.50	X	Hours Spent 0.45	=	Subtotal \$27,056,250
						+
Number of Near Misses 32,500,000	X	Management Labor Rate \$23.80	X	Hours Spent 0.5	=	Subtotal \$386,750,000
						+
	X	Base Labor Rate \$18.50	X	Hours Spent 0.15	=	Subtotal \$90,187,500
						+
Number of Fatalities 1,878	X	Management Labor Rate \$23.80	X	Hours Spent 80	=	Subtotal \$3,575,712
						+
	X	Base Labor Rate \$18.50	X	Hours Spent 24	=	Subtotal \$833,832
						=
						Total = \$624,428,294

**Hazard Identification and Assessment**  
**Initial**

Number of Hazards 32,500,000	X	Management Labor Rate \$23.80	X	Hours Spent 0.25	=	Subtotal \$193,375,000
					+	
	X	Base Labor Rate \$18.50	X	Hours Spent 0.025	=	Subtotal \$15,031,250
					=	
						Total \$208,406,250

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Total \$208,406,250	$\div$	Annualized 7.25	=	Total Annual Cost = \$28,785,393
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# Hazard Identification and Assessment

## Periodic

Number of Hazards 32,500,000	X	Management Labor Rate \$23.80	X	Hours Spent 0.125	=	Subtotal \$96,687,500
						+
	X	Base Labor Rate \$18.50	X	Hours Spent 0.0125	=	Subtotal \$7,515,625
						=
						Total per Assessment \$104,203,125

Total per Assessment \$104,203,125	X	Frequency: Low Hazard 0.5	X	Percent of Establishments with Low Hazard 0.333	=	Subtotal \$17,349,819
						+
	X	Frequency: Med Hazard 1.0	X	Percent of Establishments with Medium Hazard 0.333	=	Subtotal \$34,699,638
						+
	X	Frequency: High Hazard 2.0	X	Percent of Establishments with High Hazard 0.333	=	Subtotal \$69,399,277
						=

Total annual cost = \$121,448,720

## Hazard Identification and Assessment Prioritizing and Tracking Hazards

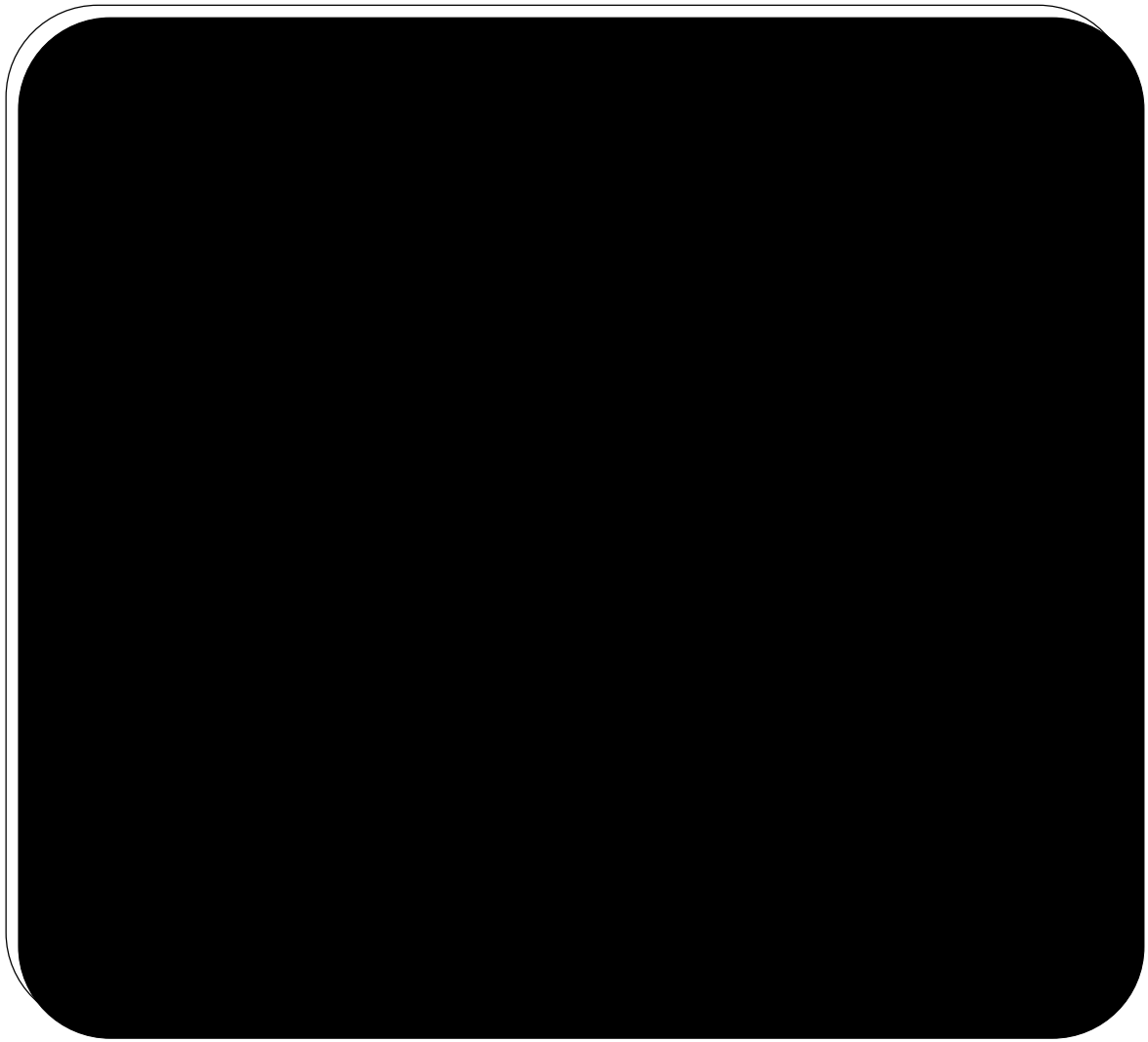
Number of Hazards 32,500,000	X	Management Labor Rate \$23.80	X	Hours Spent 0.0333	=	Total Annual Cost \$25,780,756
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## Information and Training Create a Training Program

Number of Establishments 4,487,735	X	Management Labor Rate \$23.80	X	Hours Spent Low Hazard 2	X	Percent Low Hazard 0.333	=	Subtotal \$71,198,275
							+	
			X	Hours Spent Med Hazard 4	X	Percent Med Hazard 0.333	=	Subtotal \$142,396,550
							+	
			X	Hours Spent High Hazard 8	X	Percent High Hazard 0.333	=	Subtotal \$284,793,099
							=	Total Cost \$498,387,924

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Total Cost \$498,387,924	$\div$	Annualized 7.24	=	Total Annual Cost \$68,838,111
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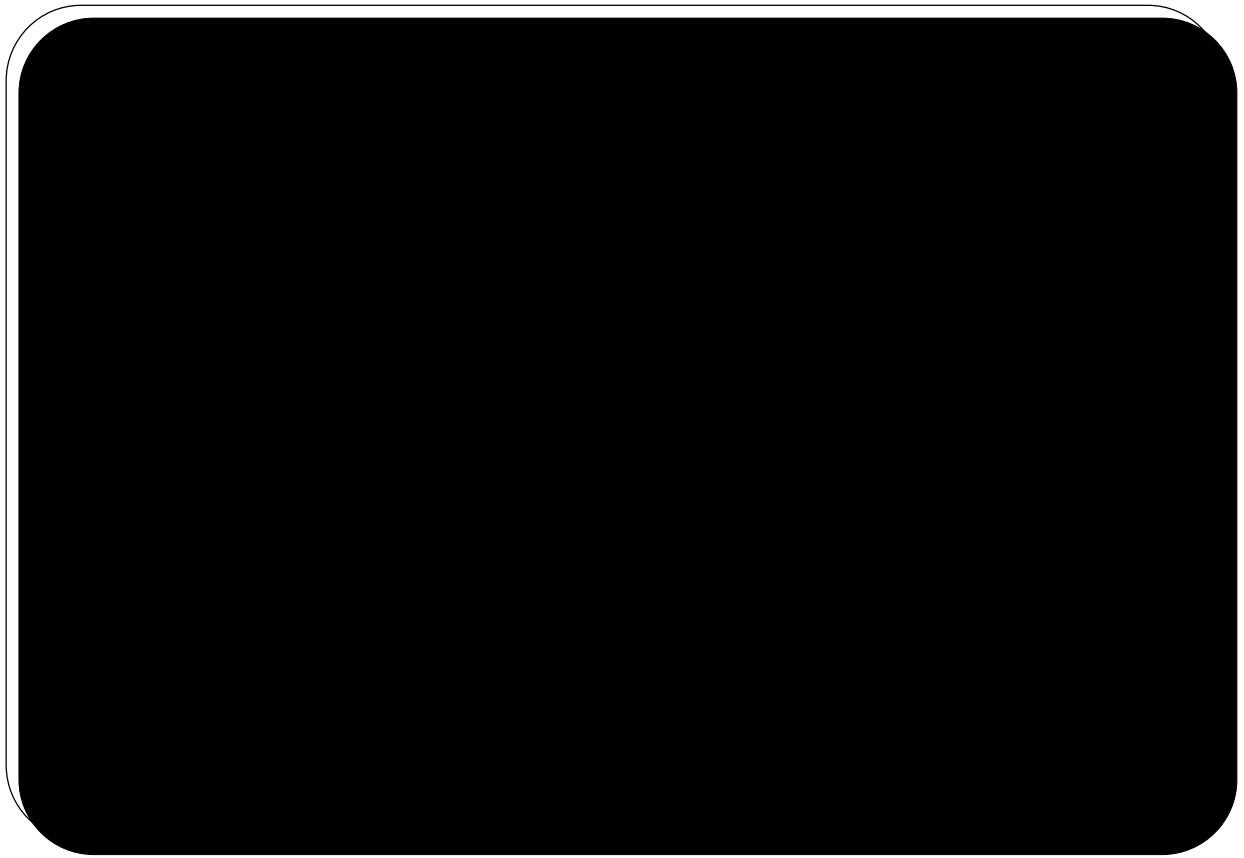
## Information and Training

### Initial Training

Number of Employees 44,732,689	X	Base Labor Rate \$18.50	X	Hours Spent Low Hazard 1	X	Percent Low Hazard 0.333	=	Subtotal \$275,824,000
								+
			X	Hours Spent Med Hazard 2	X	Percent Med Hazard 0.333	=	Subtotal \$551,648,000
								+
			X	Hours Spent High Hazard 4	X	Percent High Hazard 0.333	=	Subtotal \$1,103,296,000
								=
								Total Cost \$1,930,767,999

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Total Cost \$1,930,767,999	÷	Annualized 7.24	=	Total Annual Cost \$266,680,663
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## Information and Training

### Periodic Training

Number of Employees 44,732,689	X	1 - Turnover Rate 0.9	X	Base Labor Rate \$18.50	X	Hours Spent Low Hazard 0.5	X	Percent Low Hazard 0.333	=	Subtotal Low Hazard \$124,120,800
										+
					X	Hours Spent Med Hazard 1	X	Percent Med Hazard 0.333	=	Subtotal Med Hazard \$248,241,600
										+
					X	Hours Spent High Hazard 2	X	Percent High Hazard 0.333	=	Subtotal High Hazard \$496,483,200

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Subtotal Low Hazard \$124,120,800	X	Frequency per year 0.5	=	Total Low Hazard \$62,060,400	
					+
Subtotal Med Hazard \$248,241,600	X	Frequency per year 1	=	Total Med Hazard \$248,241,600	=
					+
Subtotal High Hazard \$496,483,200	X	Frequency per year 2	=	Total High Hazard \$992,966,400	
					<b>Total Annual Cost \$1,303,268,400</b>

<b>Program Evaluation</b>										
Number of Establishments 4,487,735	X	Management Labor Rate \$23.80	X	Hours Spent Low Hazard 4	X	Frequency per year 0.5	X	Percent Low Hazard 0.333	=	Subtotal Low Hazard \$71,175,477
									+	
			X	Hours Spent Med Hazard 6	X	Frequency per year 0.67	X	Percent Med Hazard 0.333	=	Subtotal Med Hazard \$143,113,869
									+	
			X	Hours Spent High Hazard 8	X	Frequency per year 1	X	Percent High Hazard 0.333	=	Subtotal High Hazard \$284,791,663
									+	
Number of Establishments 4,487,735	X	Base Labor Rate \$18.50	X	Hours Spent Low Hazard 1.2	X	Frequency per year 0.5	X	Percent Low Hazard 0.333	=	Subtotal Low Hazard \$16,604,620
									+	
			X	Hours Spent Med Hazard 1.8	X	Frequency per year 0.67	X	Percent Med Hazard 0.333	=	Subtotal Med Hazard \$33,388,748
									+	
			X	Hours Spent High Hazard 2.8	X	Frequency per year 1	X	Percent High Hazard 0.333	=	Subtotal High Hazard \$66,418,478

Number of Establishments 4,487,735	X	Management Labor Rate \$23.80	X	Hours Spent Low Hazard 4	X	Frequency per year 0.5	X	Percent Low Hazard 0.333	=	Subtotal Low Hazard \$71,175,477
									+	
			X	Hours Spent Med Hazard 6	X	Frequency per year 0.67	X	Percent Med Hazard 0.333	=	Subtotal Med Hazard \$143,113,869
									+	
			X	Hours Spent High Hazard 8	X	Frequency per year 1	X	Percent High Hazard 0.333	=	Subtotal High Hazard \$284,791,663
									+	
Number of Establishments 4,487,735	X	Base Labor Rate \$18.50	X	Hours Spent Low Hazard 1.2	X	Frequency per year 0.5	X	Percent Low Hazard 0.333	=	Subtotal Low Hazard \$16,604,620
									+	
			X	Hours Spent Med Hazard 1.8	X	Frequency per year 0.67	X	Percent Med Hazard 0.333	=	Subtotal Med Hazard \$33,388,748
									+	
			X	Hours Spent High Hazard 2.8	X	Frequency per year 1	X	Percent High Hazard 0.333	=	Subtotal High Hazard \$66,418,478
										Total Annual Cost = \$615,492,855

## Program Updates

Program Evaluation Cost \$615,492,855	X	Percent of Hours Spent 0.25	=	Total Annual Cost \$153,873,214
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**Multi-Employer Worksites  
Communication by Host Employer**

Number of Establishments 4,487,735	X	Percent Multi-employer Establishments 0.9	X	Management Labor Rate \$23.80	X	Hours Spent > 100 2	X	Percent Estab. >100 0%	=	Subtotal \$0	
										+	
						X	Hours Spent < 100 1	X	Percent Estab. < 100 100%	=	Subtotal \$96,127,284
										=	Total Cost \$96,127,284

Number of Establishments 4,487,735	X	Percent Multi-employer Establishments 0.9	X	Management Labor Rate \$23.80	X	Hours Spent > 100 2	X	Percent Estab. >100 0%	=	Subtotal \$0
									+	
					X	Hours Spent < 100 1	X	Percent Estab. < 100 100%	=	Subtotal \$96,127,284
									=	Total Cost \$96,127,284

## Hazard Control Initial

Number of Hazards 32,500,000	X	Cost per Hazard Low \$174	X	Percent Low Hazard 0.333	=	Subtotal \$1,884,999,812
					+	
	X	Cost per Hazard Med - High \$437	X	Percent Med - High Hazard 0.667	=	Subtotal \$9,468,333,807
					=	
						Total \$11,353,333,618

Total \$11,353,333,618	$\div$	Annualized 7.24	X	20% Reduction 1	=	Total Annual Cost \$1,568,140,003
			X	30% Reduction 1.5	=	Total Annual Cost \$2,352,210,004
			X	40% Reduction 2	=	Total Annual Cost \$3,136,280,005

## Hazard Control Recurring

Number of Hazards 8,125,000	X	Cost per Hazard Low \$89	X	Percent Low Hazard 0.333	=	Subtotal \$241,041,642
						+
	X	Cost per Hazard Med - High \$159	X	Percent Med - High Hazard 0.667	=	Subtotal \$861,250,043
						=
						Total Annual Cost \$1,102,291,686